

Day : Wednesday

Date: 6/8/2005

Time: 15:39:21

 PALM INTRANET

Inventor Information for 10/725564

Inventor Name	City	State/Country
GUTMARK, EPHRAIM	CINCINNATI	OHIO
PASCHEREIT, CHRISTIAN OLIVER	BERLIN	GERMANY

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L10	971	F02C009/28	EPO; DERWENT	OR	ON	2005/06/08 11:54
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L22	310	(431/75).CCLS.	US-PGPUB; USPAT	OR	OFF	2005/06/08 12:13
L23	133	(60/725).CCLS.	US-PGPUB; USPAT	OR	OFF	2005/06/08 12:14
L24	186	(60/734).CCLS.	US-PGPUB; USPAT	OR	OFF	2005/06/08 12:14
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L27	1008	combustion and acoustic	EPO; JPO; DERWENT	OR	ON	2005/06/08 12:23
L28	4756	combustion and acoustic	US-PGPUB; USPAT; USOCR	OR	ON	2005/06/08 12:22
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L30	6	combustion and acoustic and (interference near4 frequenc\$3)	EPO; JPO; DERWENT	OR	ON	2005/06/08 12:24
L31	61	combustion and acoustic and (interference near4 frequenc\$3)	US-PGPUB; USPAT; USOCR	OR	ON	2005/06/08 12:55
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L33	20	((("2807931") or ("4044203") or ("4490841") or ("4784600") or ("4801261") or ("4909731") or ("4934926") or ("5169302") or ("5211705") or ("5233540") or ("5249954") or ("5299930") or ("5373695") or ("5428951") or ("5431008") or ("5575144") or ("5676538") or ("5719791") or ("5784300") or ("5784889")).PN.	US-PGPUB; USPAT	OR	OFF	2005/06/08 13:00
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L35	7	F23D021/00 and (acoustic or thermoacoustic)	EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/06/08 13:02
L36	752	F23C011/04	EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/06/08 13:02
L37	1569	F02C009/28	EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/06/08 13:02
L38	53	F23C011/04 and (acoustic or thermoacoustic)	EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/06/08 13:02
L39	12	F02C009/28 and (acoustic or thermoacoustic)	EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/06/08 13:02

PLUS Search Results for S/N 10725564, Searched June 07, 2005

The Patent Linguistics Utility System (PLUS) is a USPTO automated search system for U.S. Patents from 1971 to the present. PLUS is a query-by-example search system which produces a list of patents that are most closely related linguistically to the application searched. This search was prepared by the staff of the Scientific and Technical Information Center, SIRA.

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5307767	6645144

DERWENT-ACC-NO: 1982-H0399E

DERWENT-WEEK: 198224

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TITLE: Acoustic attenuators with active sound cancelling - has adaptive filter which drives speaker for production of cancelling sound 180 degrees of out phase

INVENTOR: POOLE, L A; TICHY, J ; WARNAKA, G E

PATENT-ASSIGNEE: ACTIVE NOISE & VIBRATION TECHN[ACTIN] , LORD CORP[LORD]

PRIORITY-DATA: 1980US-0213254 (December 5, 1980)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	
MAIN-IPC				
GB 2088951 A	June 16, 1982	N/A	035	N/A
CA 1161766 A	February 7, 1984	N/A	000	N/A
DE 3144052 A	July 8, 1982	N/A	000	N/A
DE 3144052 C2	July 15, 1993	N/A	026	G10K
011/16				
FR 2495809 A	June 11, 1982	N/A	000	N/A
GB 2088951 B	August 22, 1984	N/A	000	N/A
US 4473906 A	September 25, 1984	N/A	000	N/A

APPLICATION-DATA:

PUB-NO	APPL-DESCRIPTOR	APPL-NO	APPL-DATE
GB 2088951A	N/A	1981GB-0032854	October 30,
1981			
DE 3144052C2	N/A	1981DE-3144052	November 6,
1981			
US 4473906A	N/A	1980US-0213254	December 5,
1980			

INT-CL (IPC): F01N001/06, F16L055/02 , G05D019/02 , G10K011/16 , G10K011/36 , H04B011/00 , H04B015/00 , H04R001/00

ABSTRACTED-PUB-NO: DE 3144052C

BASIC-ABSTRACT:

The microphone array (33) senses source sound in a duct (13) and converts it to an electrical signal which is sent to an electronic adaptive filter (23). The adaptive filter drives a speaker (17) for the production of cancelling sound 180 degrees out of phase with the source sound, which propagates through a waveguide (19) to an acoustic mixer (15). A microphone (35) located in a position downstream from the waveguide within the acoustic mixer produces a signal which represents the error between the attenuation achieved in the acoustic mixer and the desired attenuation based on preset levels.

This error signal is introduced into the adaptive filter (23) which then adjusts its signal driving the speaker so that the cancelling sound propagating into the acoustic mixer more nearly approx. the mirror image of the source sound. The adaptive filter has a modified LMS (least means square) algorithm governing the operation of its transversal filter which accommodates the

inherent delays associated with the propagation of acoustic waves in a duct. A number of wave guides may connect the speaker to the acoustic mixer. A single electronic circuit may provide the signal processing for a pair of ducts.

ABSTRACTED-PUB-NO: GB 2088951A

EQUIVALENT-ABSTRACTS:

An active noise damper has at least one input sensor (33) to detect the noise in a channel (13) from a source and generate a first signal representing the amplitude and phase characteristics of the noise. A canceller (17) generates cancelling noise which is fed into the channel (13) to compensate for the source noise. An error detector (35) detects the combined source and cancelling noise and generates a second signal representing the amplitude and phase of the noise after compensation. The second signal is delayed due to the transmission time from the sensor (33) to the canceller (17) and the error detector (35). A control is connected to the input sensor (33), the canceller (17) and the error detector (35) to activate and control the canceller (17). The control includes an adjustable filter (23) to adjust the delay.

A mixer (15) connected to the channel (13) at a distance from the input sensor (33) forms a continuation of the channel (13). A wave guide (19) connects the canceller (17) to the mixer (15) and provides a path for the cancelling noise (17) to the mixer (15) and provides a path for the cancelling noise. The distance between the guide (19) and the end of the channel (13) is not less than three times the max. cable diameter.

ADVANTAGE - Simple construction and efficiently allows optimal damping.

GB 2088951B

The microphone array (33) senses source sound in a duct (13) and converts it to an electrical signal which is sent to an electronic adaptive filter (23). The adaptive filter drives a speaker (17) for the production of cancelling sound 180 degrees out of phase with the source sound, which propagates through a waveguide (19) to an acoustic mixer (15). A microphone (35) located in a position downstream from the waveguide within the acoustic mixer produces a signal which represents the error between the attenuation achieved in the acoustic mixer and the desired attenuation based on preset levels.

This error signal is introduced into the adaptive filter (23) which then adjusts its signal driving the speaker so that the cancelling sound propagating into the acoustic mixer more nearly approx. the mirror image of the source sound. The adaptive filter has a modified LMS (least means square) algorithm governing the operation of its transversal filter which accommodates the inherent delays associated with the propagation of acoustic waves in a duct. A number of wave guides may connect the speaker to the acoustic mixer. A single electronic circuit may provide the signal processing for a pair of ducts.

US 4473906A

The active attenuator includes an input sensor for detecting the source vibration and a cancelling speaker for generating cancelling vibration. An error sensor is provided for sensing the combination of source and cancelling vibration and an electronic controller is coupled to the input sensor, cancelling speaker and error sensor.

The electronic controller includes an adaptive cancelling filter which employs a deterministic algorithm operable to accommodate the propagation delays of the vibration sensed by the input and error sensors. The controller produces an

output to activate and control the cancelling speaker for the production of cancelling vibration.

USE - Partic. for cancelling noise carried by heating and ventilating ducts and originating from machinery and mfr. operations. (27pp)

CHOSEN-DRAWING: Dwg.5/16 Dwg.5 Dwg.5

TITLE-TERMS: ACOUSTIC ATTENUATE ACTIVE SOUND CANCEL ADAPT FILTER DRIVE SPEAKER
PRODUCE CANCEL SOUND DEGREE PHASE

DERWENT-CLASS: P86 Q51 Q67 W04 X27

EPI-CODES: W04-G; W04-T; X27-E01;

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
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L22	310	(431/75).CCLS.	US-PGPUB; USPAT	OR	OFF	2005/06/08 12:13
L23	133	(60/725).CCLS.	US-PGPUB; USPAT	OR	OFF	2005/06/08 12:14
L24	186	(60/734).CCLS.	US-PGPUB; USPAT	OR	OFF	2005/06/08 12:14
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L29	47	combustion and thermoacoustic	EPO; JPO; DERWENT	OR	ON	2005/06/08 12:23
L30	6	combustion and acoustic and (interference near4 frequenc\$3)	EPO; JPO; DERWENT	OR	ON	2005/06/08 12:24
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